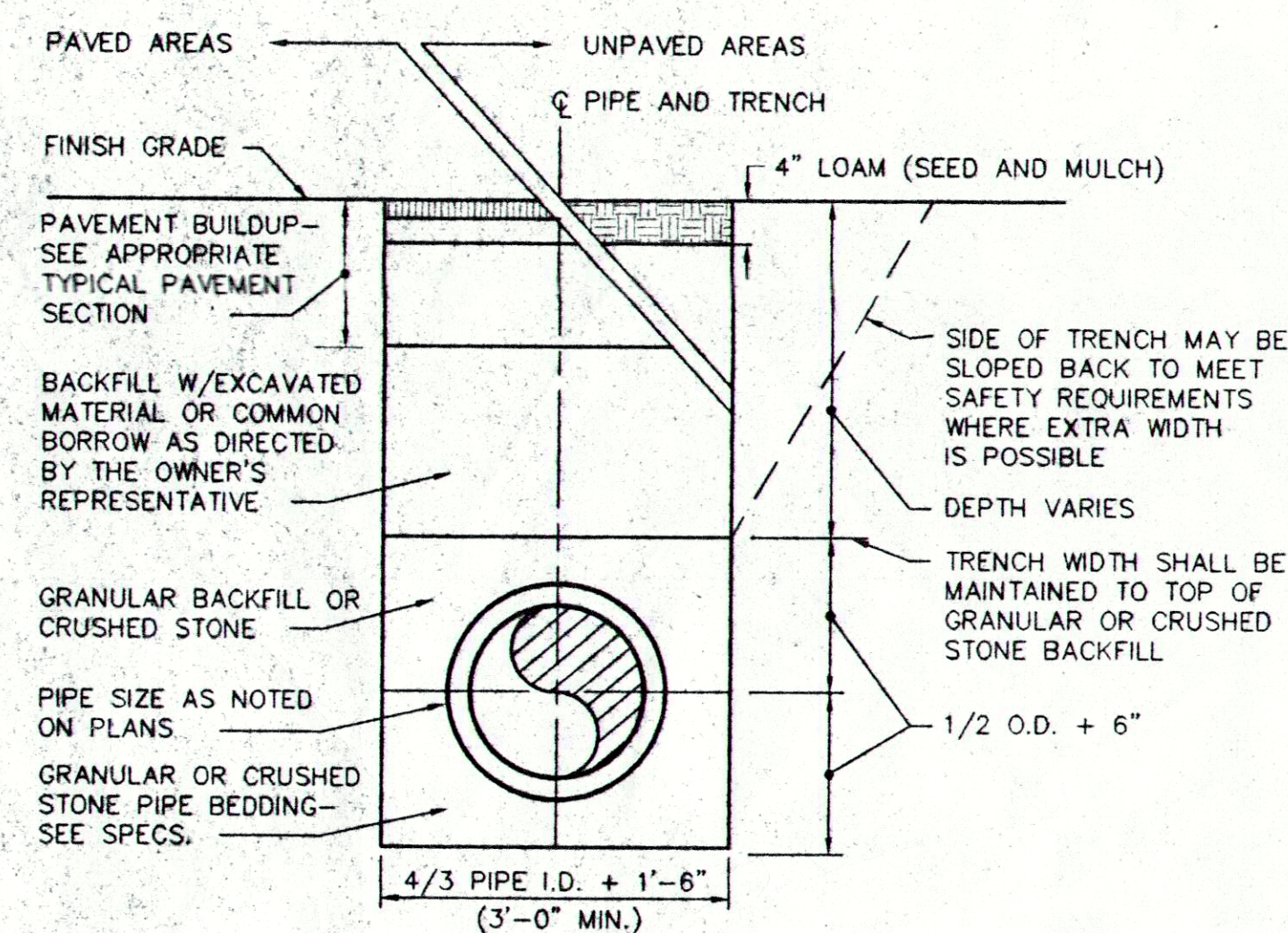
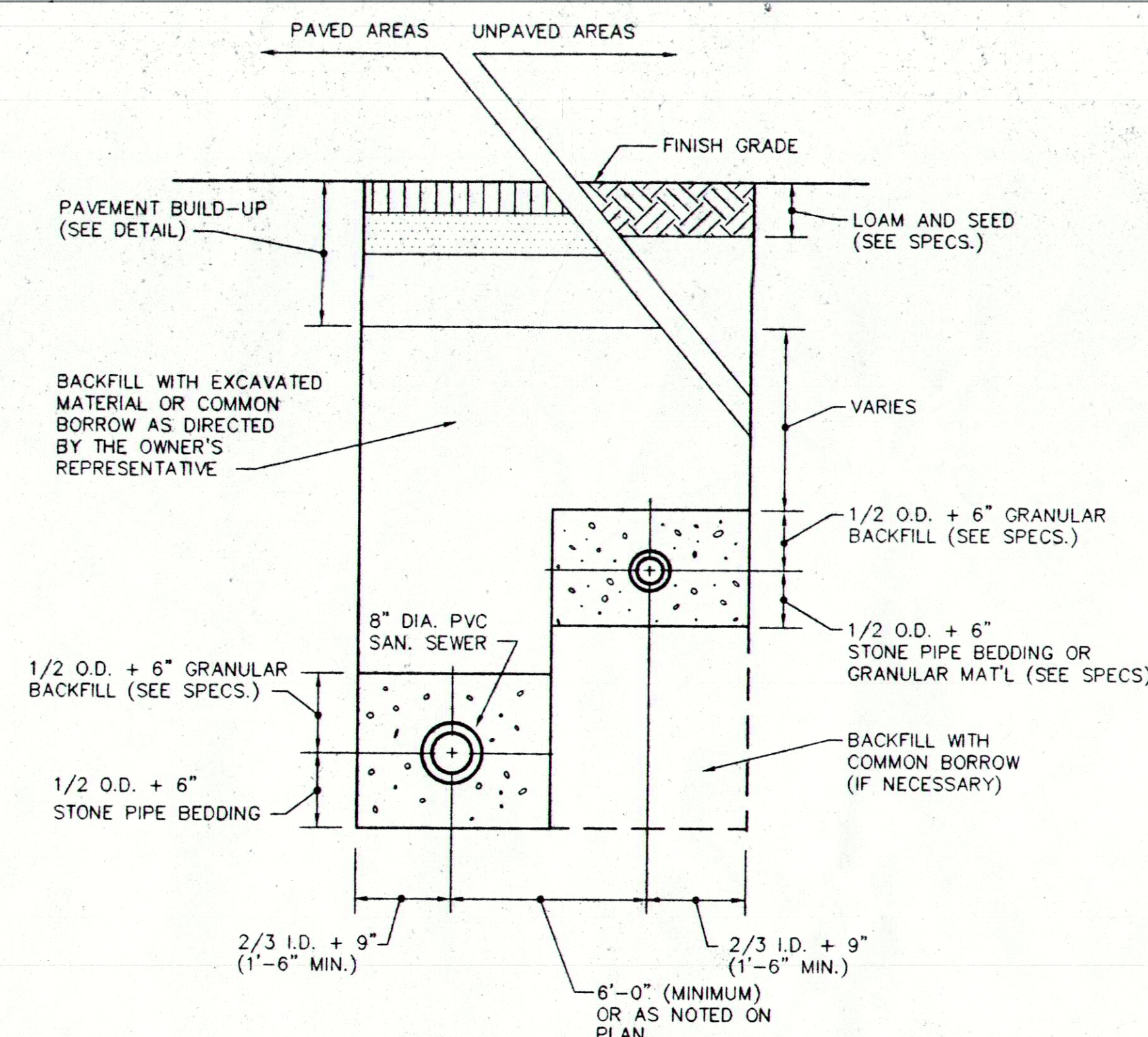


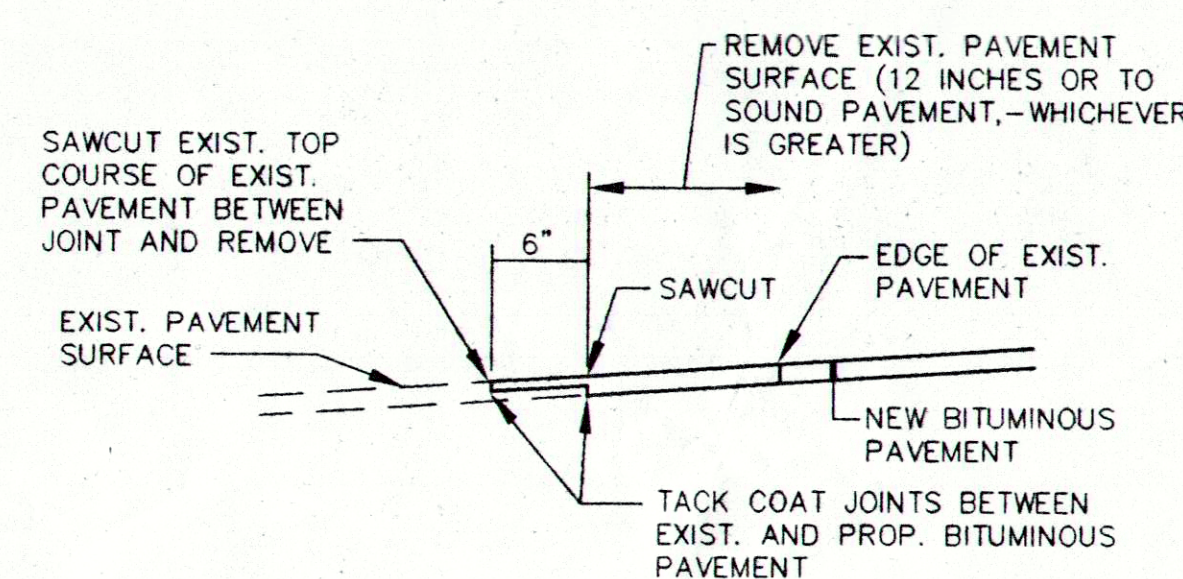
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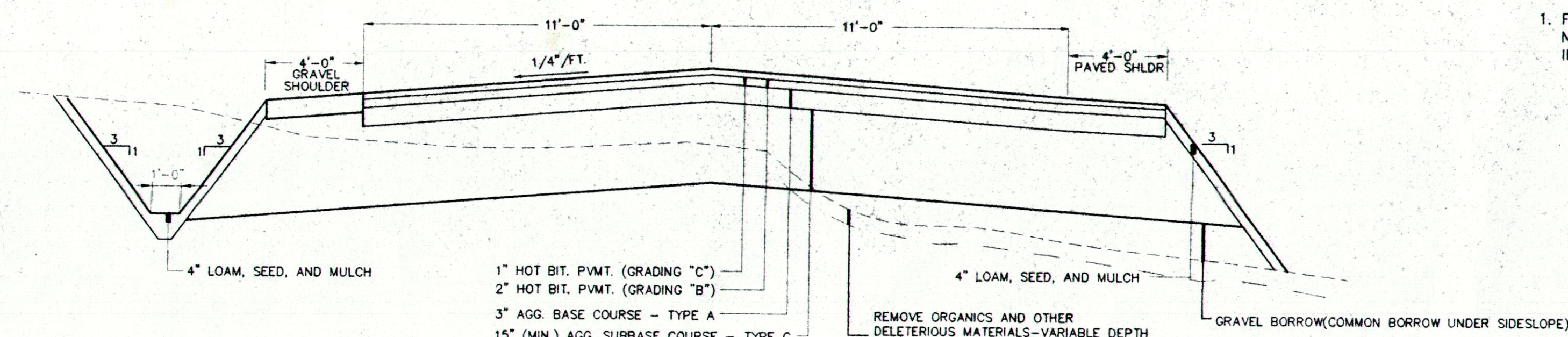
TYPICAL TRENCH DETAIL
N.T.S.



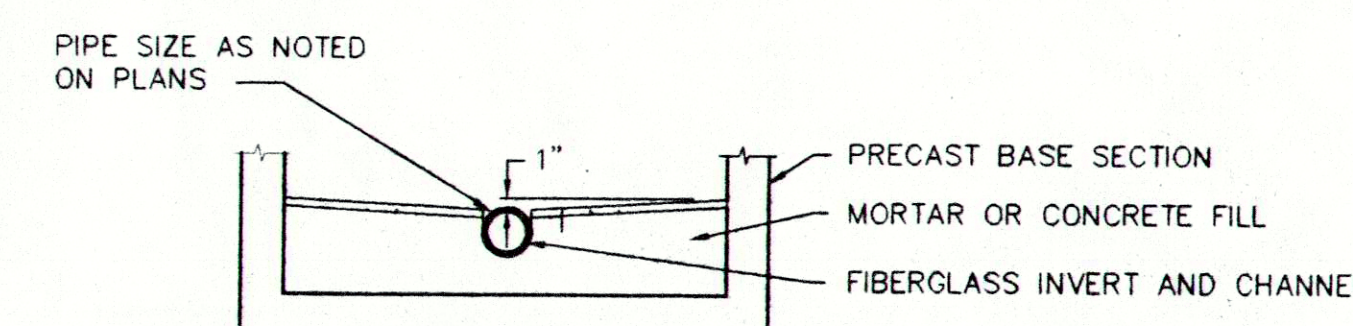
DOUBLE PIPE TRENCH
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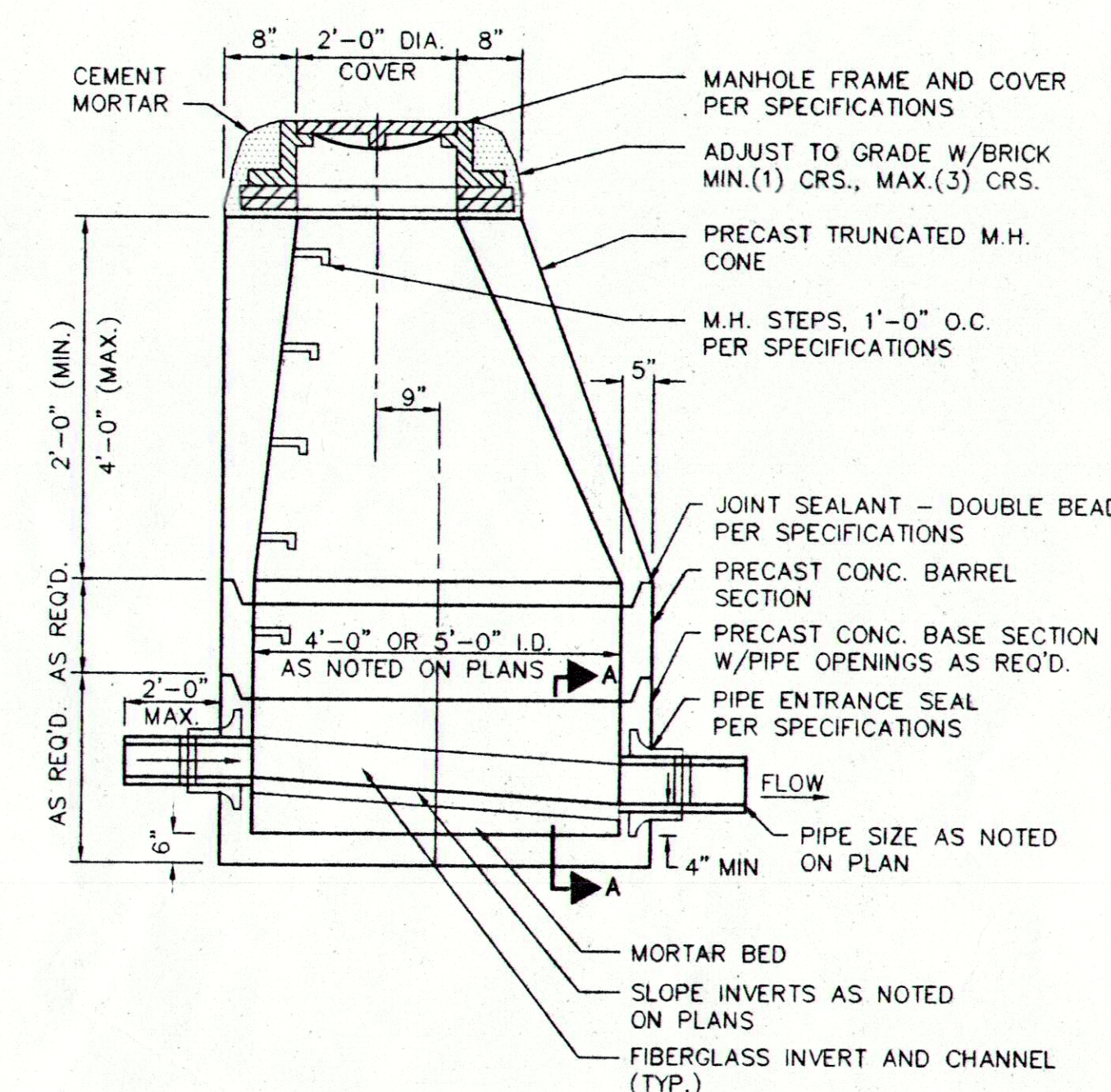
BUTT JOINT DETAIL
N.T.S.



TYPICAL ROADWAY CROSS SECTION
N.T.S.



SECTION A-A



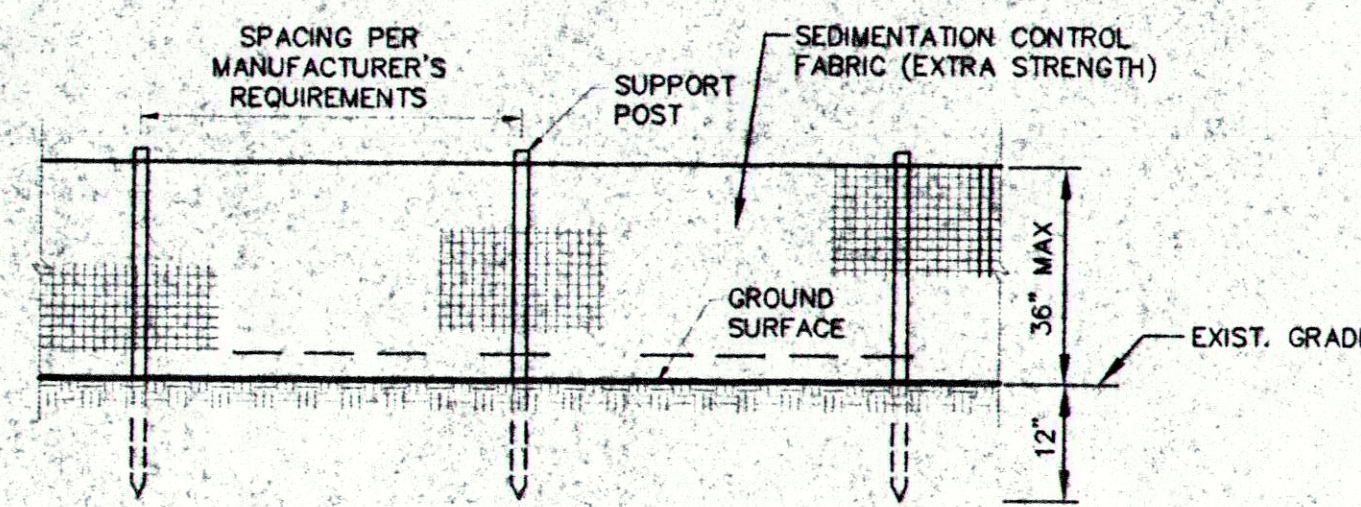
TYPICAL SANITARY MANHOLE
N.T.S.

GENERAL NOTES:

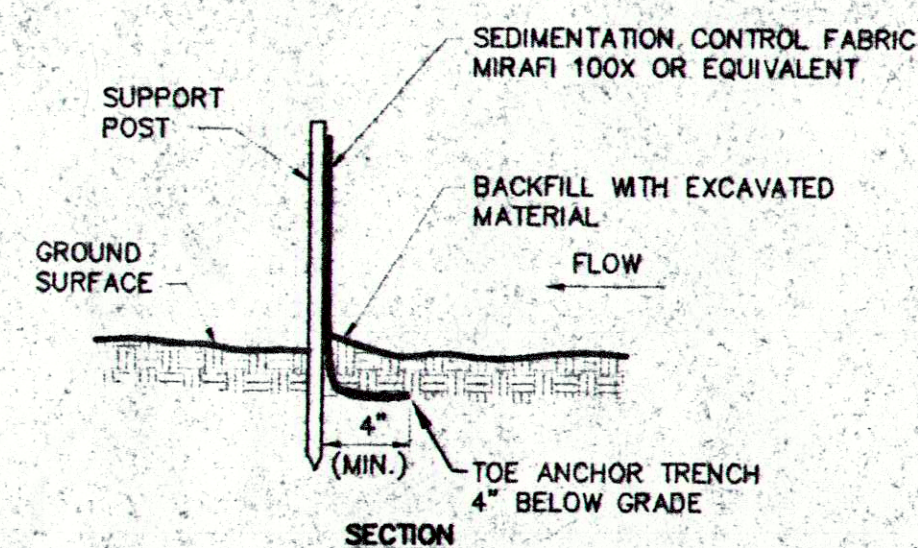
1. FOR WATERLINE AND THRUST BLOCK DETAILS AND NOTES, REFER TO DRAWINGS NUMBERED 1 THROUGH 3, TITLED "8" & 12" WATER MAIN, TYPICAL DETAILS FOR INSTALLATION" PREPARED BY THE PORTLAND WATER DISTRICT, DATED JUNE OF 1988.



FIELD BOOK #	E	1/8/96	REVISED PER TOWN'S COMMENTS	JRK	DESIGN: RDA	CLIENT: LELAND DAHLGREN 20 U.S. ROUTE 1 YARMOUTH, MAINE
FIELD BOOK PAGE	D	6/22/95	FOR BIDS	RDA	DRAWN: MSB	PROJECT: CUMBERLAND BUSINESS PARK U.S. ROUTE 1 CUMBERLAND, MAINE
FLAT FILE INDEX NUMBER	C	4/27/95	MISC. REVISIONS	RDA	CHECKED: RDA	MISCELLANEOUS DETAILS
REV. DATE	B	2/24/95	SUBMITTED TO DEP.	RDA	SCALE: AS NOTED	PROJECT NUMBER: 94-242 DRAWING NUMBER: C-301
PROJECT DIR.	A	2/7/95	SUBMITTED FOR PREL. PLANNING BOARD APPROVAL	RDA	BY	REV. E
DRAWING NAME	SQUAW BAY CORP. Consulting Engineers P.O. BOX 804 CUMBERLAND CENTER, ME. 04021					

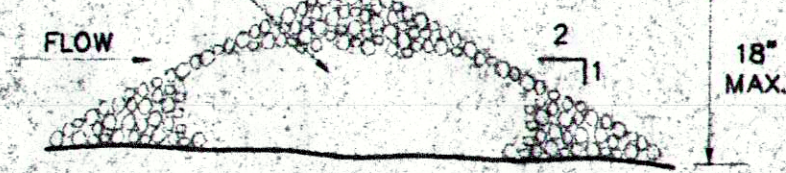
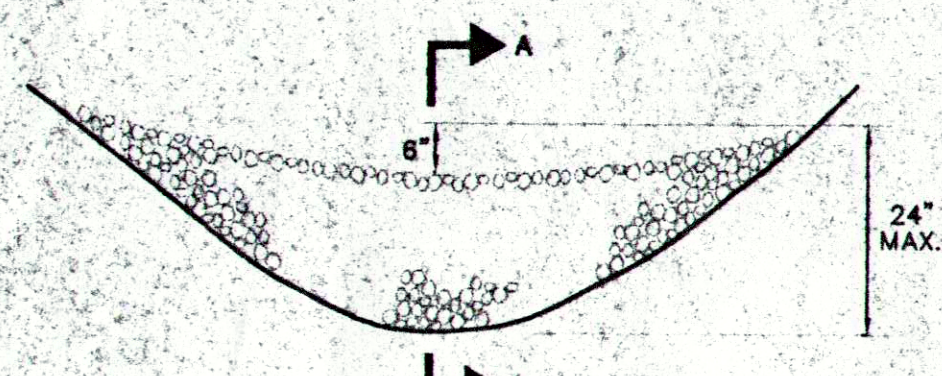


ELEVATION



SECTION

SILT FENCE (KEYED IN)
N.T.S.

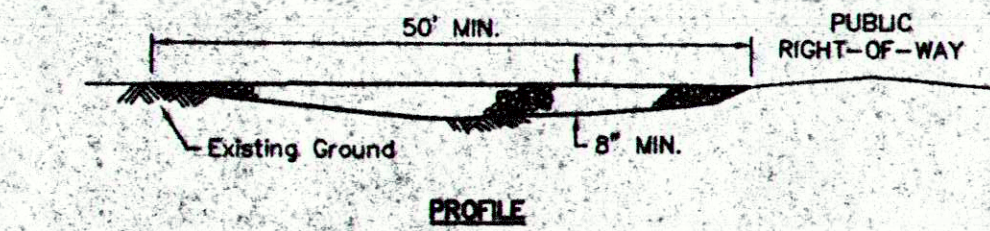


SECTION A-A

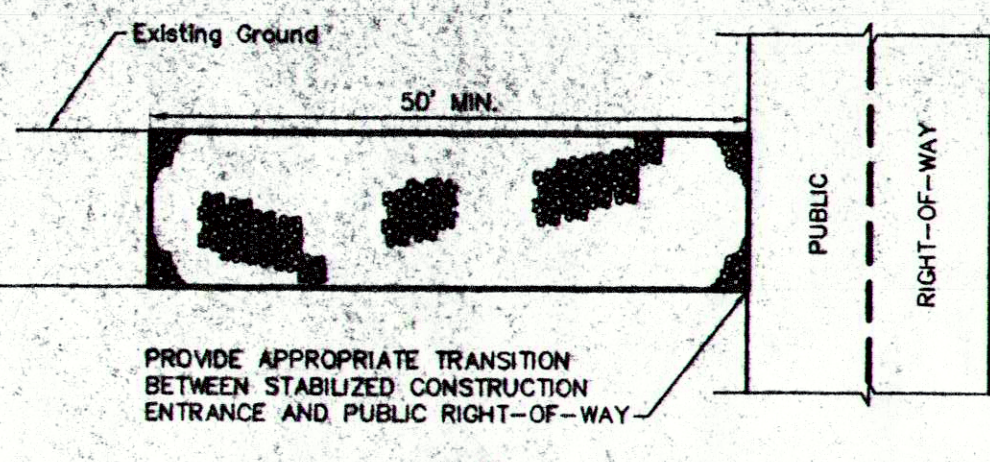
SPACING BETWEEN CHECK DAMS

S ₀ (FT./FT.)	L (FT.)
0.020	75
0.030	50
0.040	40
0.050	30
0.080	20
0.100	10

STONE CHECK DAMS
N.T.S.



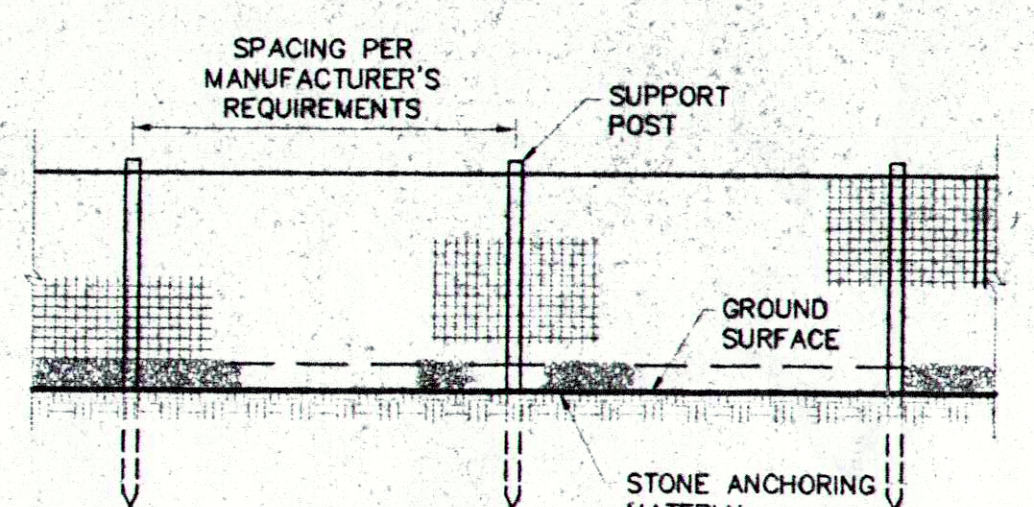
PROFILE



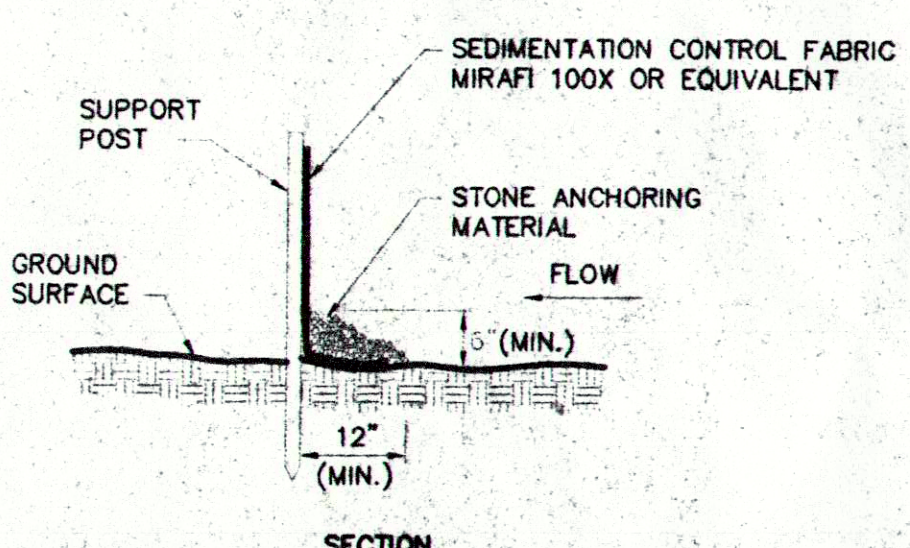
PLAN

- CONSTRUCTION SPECIFICATIONS
- STONE SIZE - AASHTO DESIGNATION M 43, SIZE NO. 2 (2 1/2" to 1 1/2").
 - USE CRUSHED STONE.
 - LENGTH - AS EFFECTIVE, BUT NOT LESS THAN 50 FEET.
 - THICKNESS - NOT LESS THAN EIGHT (8) INCHES.
 - WIDTH - NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
 - MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC REPAIR AND TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.

STABILIZED CONSTRUCTION ENTRANCE
N.T.S.

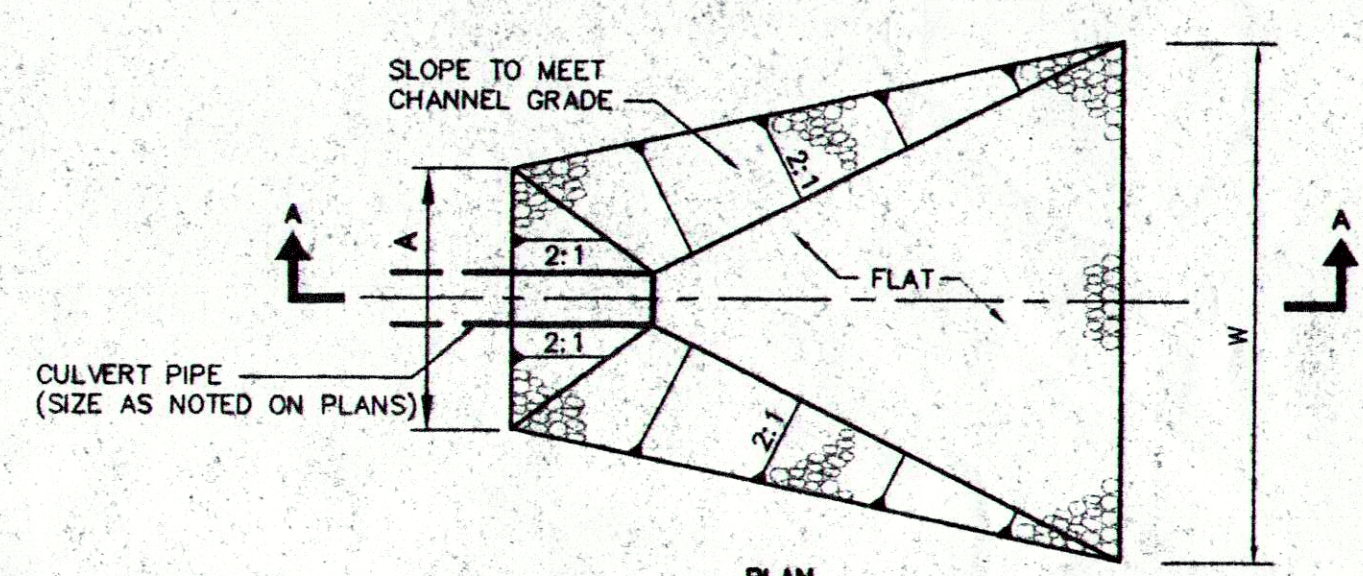


ELEVATION

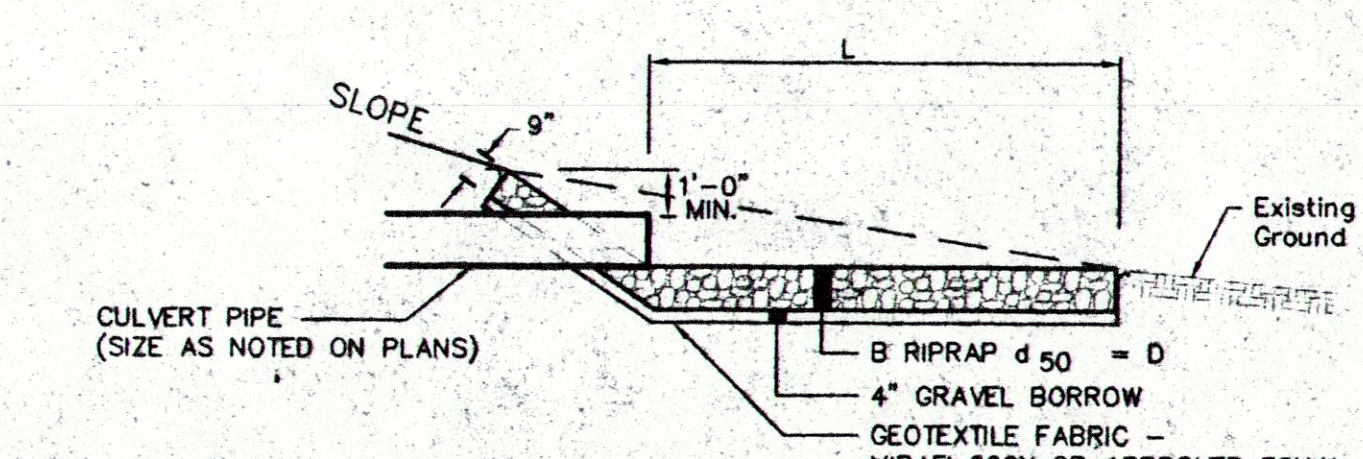


SECTION

SILT FENCE (LAID ON GROUND)
N.T.S.



PLAN



SECTION A-A

TYPICAL SECTION
RIPRAP INLET/OUTLET PROTECTION
N.T.S.

CULVERT LOCATION	CULVERT DIAMETER	RIPRAP APRON					
		L	W	A	B	D	
MAIN ACCESS RD STA. 1+50±	15"	8'	10'	4'	9"	4"	
MAIN ACCESS RD STA. 8+00±	18"	10'	12'	5'	9"	4"	
COMMON ACCESS LOTS 6 & 7	24"	10'	6'	6'	9"	4"	
COMMON ACCESS LOTS 4 & 5	24"	10'	6'	6'	9"	4"	
COMMON ACCESS LOTS 4 & 5 REAR	2-24"	14'	20'	8'	14"	6"	
COMMON ACCESS LOTS 2 & 3	1-24" (EXIST) 1-18" (NEW)	36'	18'	6'	14"	6"	
MAIN ACCESS RD. CUL-DE-SAC	12" ST. DRAIN	8'	9'	3'	9"	4"	

TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL

A. GENERAL

- All soil erosion and sediment control will be done in accordance with the Maine Erosion and Sediment Control Handbook for Construction: Best Management Practices, Cumberland County Soil and Water Conservation District, Department of Environmental Protection, March 1991, and as currently revised.
- Leland Dahlgren or his agent will be responsible for the repair/replacement/ maintenance of all erosion control measures until all disturbed areas are stabilized.
- Disturbed areas will be permanently stabilized within 15 days of final grading. Disturbed areas not to be worked upon within 14 days of disturbance, shall be temporarily stabilized within 7 days of the disturbance.
- In all areas, removal of trees, bushes and other vegetation, as well as disturbance of topsoil will be kept to a minimum while allowing proper site operations.
- Any suitable topsoil will be stripped and stockpiled for reuse in final grading. Topsoil will be stockpiled in a manner such that natural drainage is not obstructed and no off-site sediment damage will result. If a stockpile is necessary, the side slopes of the topsoil stockpile will not exceed 2:1. Silt fence will be installed around the perimeter of all topsoil stockpiles. Topsoil stockpiles will be surrounded by siltation fencing and will be temporarily seeded with annual ryegrass, annual or perennial ryegrass, within 7 days of formation, or temporarily mulched if seeding cannot be done within the recommended seeding dates. Recommended seeding dates and application rates are as follows:

Annual Ryegrass: Recommended Seeding Dates: 9/15 - 11/1
Application Rate: 112 lbs/acre

Perennial Ryegrass: Recommended Seeding Dates: 4/1 - 7/1
Application Rate: 40 lbs/acre

Mulch:
Hay or Straw
Application Rate: 1.5 - 2.0 tons/acre.
Anchor with mulch netting (installed per manufacturer's recommendations)
Wood Fiber Cellulose
Application Rate: 4,000 lbs/acre.
Anchoring not required

B. TEMPORARY MEASURES

1. Silt Fence

- Silt fence will be installed prior to and down-gradient of all construction activity where soil disturbance may result in erosion.
- The height of a silt fence will not exceed 36 inches.
- The filter fabric will be purchased in a continuous roll cut to the length of the barrier to avoid the use of joints. When joints are necessary, filter cloth will be spliced together only at a support post, with a minimum 6-inch overlap, and securely sealed.
- Posts will be spaced a maximum of 10 feet apart at the barrier location and driven securely into the ground (minimum of 12 inches). When extra strength fabric is used without the wire support fence, post spacing will not exceed 6 feet.
- A trench will be excavated approximately 4 inches wide and 4 inches deep along the line of posts and upgradient from the barrier.
- When standard strength filter fabric is used, a wire mesh support fence will be fastened securely to the upgradient side of the posts using heavy duty wire staples at least 1 inch long, tie wires or hog rings. The wire will extend more than 36 inches above the original ground surface.
- The standard strength of filter fabric will be stapled or wired to the fence, and 8 inches of the fabric will be extended into the trench. The fabric will not extend more than 36 inches above the original ground surface. Filter fabric will not be stapled to existing trees.
- When extra strength filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated. In such a case, the filter fabric will be stapled or wired directly to the posts with all other provisions of item (a) applying.
- The trench will be backfilled and the soil compacted over the filter fabric.
- Silt fences will be removed when they have served their useful purpose, but not before the upgradient areas have been permanently stabilized.

- Silt fences will be inspected immediately after each rainfall and at least daily during prolonged rainfall. They will be inspected if there are any signs of erosion or sedimentation below them. Any required repairs will be made immediately. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water behind them, they will be replaced with a temporary crushed stone check dam.
- Should the fabric on a silt fence decompose or become ineffective prior to the end of the expected usable life, and the barrier still be necessary, the fabric will be replaced promptly.
- Sediment deposits should be removed after each storm event if significant buildup has occurred.
- In lieu of providing the 4" x 4" trench for conditions of frozen ground, severe rocky soil or hummocky conditions with large roots, or other prohibitive conditions, the bottom 8" - 12" of the fabric may be laid on existing grade and backfilled with stone anchoring material, as shown on Drawing C-300, Erosion Control Details and Specifications.

2. Stone Check Dams

- Stone check dams should be constructed of 2 to 3 inch stone. The stone should be placed according to the configuration shown on Dwg. C-300. Hand or mechanical placement will be necessary to achieve complete coverage of the ditch or swale and to ensure that the center of the dam is lower than the edges.
- Check dams should be installed as the swale is being constructed.
- Sediment will be removed from behind the check dams when it has accumulated to one half of the original height of the dam.
- Check dams will be removed when the grass has matured sufficiently to protect the ditch or swale. The area beneath the check dams will be seeded and mulched immediately after they are removed.
- Regular inspections will be made to ensure that the center of the dam is lower than the edges. Erosion caused by high flows around the edges of the dam will be corrected. If evidence of siltation in the water is apparent downstream from the check dam, the check dam will be inspected and adjusted. Check dams will be checked for sediment accumulation after each significant rainfall.

C. PERMANENT MEASURES

1. Riprapped Ditches and Aprons

- Construct riprapped ditches in accordance with the details shown on the Drawings.
- Stone for riprap will consist of sub-angular field stone or rough unweh quarry stone. The stone will be hard and of such quality that it will not disintegrate on exposure to water or weathering, be chemically stable and suitable in all other respects for the purpose intended. The bulk specific gravity (saturated surface-dry basis) of the individual stones will be at least 2.5.
- The riprap should be placed so that it produces a dense well-graded mass of stone with a minimum of voids. The desired distribution of stones throughout the mass may be obtained by selective loading at the quarry, controlled dumping of successive loads during final placing, or by combination of these methods. The riprap should be placed to its full thickness on one operation. The riprap should not be placed in layers. The riprap should not be placed by dumping into chutes or similar methods which are likely to cause segregation of the various stone sizes. Care should be taken not to dislodge the underlying material when placing the stones.
- The finished slope should be free of pockets of small stone or clusters of large stones. Hand placing may be necessary to achieve the required grades and a good distribution of stone sizes. Final thickness of the riprap blanket should be within plus or minus 1/4 of the specified thickness.
- Riprap will be inspected periodically to determine if high flows have caused scour beneath the riprap or dislodged any of the stone. If repairs are needed, they should be accomplished immediately.

2. Topsoil, Seed, Mulch

- Topsoil: Use stockpiled materials spread to the depths shown on the plans, if available. Approved topsoil substitutes may be used (refer to Section 13.0 of Best Management Practices Handbook, see Note 2).

- Seeding should be completed by August 15 of each year. Late season seeding may be done between August 15 and September 15. Areas not seeded or which do not obtain satisfactory growth by October 1, will be seeded with Annual Ryegrass or mulched at rates previously specified herein. After November 1, or the first killing frost, disturbed areas should be seeded at double the specified application rates, mulched and anchored.

SEEDING SPECIFICATIONS

Seed:	Roadside	Lawn
Mixture	lbs/acre	lbs/acre
Kentucky Bluegrass	20	55
White Clover	5	0
Creeping Red Fescue	20	55
Perennial Ryegrass	5	15

- Fertilizer: Apply 800 pounds per acre of 10-20-20 fertilizer or equivalent per acre (18.4 lbs/1,000 sq. ft.).
- Lime: Apply ground limestone at a rate of 3 tons per acre (138 lbs/1,000 sq. ft.).
- Mulch: Mulch with hay or straw at 1.0 - 2.0 tons per acre.

Anchor mulch with mulch netting installed per manufacturer's recommendations.

- If permanent vegetated stabilization cannot be established due to the season of the year, all exposed and disturbed areas not to undergo further disturbance are to have dormant seeding applied and be temporarily mulched to protect the site. The following methods may be used to perform a dormant seeding:

- Prepare the seedbed, add the required amounts of lime and fertilizer, then mulch and anchor. After the first killing frost and before snow fall, broadcast or hydrosed the selected seed mixture. Double the regular seeding rates for this type seeding.
- When soil conditions permit, between the first killing frost and before snow fall, prepare the seedbed, lime and fertilizer, apply the selected seed mixture, and mulch and anchor. Double the regular seeding rates for this type of seeding.

Dormant seedings need to be anchored extreme well on slopes, ditch boses and areas of concentrated flows.

Dormant seeding requires inspection and reseeding as needed in the spring. All areas where cover is inadequate must be immediately reseeded and mulched as soon as possible.

D. MAINTENANCE PLAN

1. Routine Maintenance

Inspection shall be performed annually by a qualified person during wet weather to ensure that the facility performs as intended. Inspection priorities shall include checking erosion controls for accumulation of sediments.

2. Grassed Areas

- Lime according to a soil test or at a minimum of every five years using a rate of 2 tons per acre (100 pounds per 1,000 sq. ft.).
- Topdress with fertilizer in the early spring (before May 15) one year after planting with a balanced fertilizer, applying 50 pounds of nitrogen/acre (500 pounds of 10-20-20 per acre). Thereafter, fertilize according to a soil test or broadcast biennially, 300 pounds of 10-10-10 or equivalent per acre (7.5 pounds per 1,000 sq. ft.).

E. INSPECTIONS

Inspections will be undertaken by qualified personnel to ensure that temporary and permanent erosion and sedimentation controls are properly installed and correctly functioning, and that additional erosion control measures are installed if needed. Such inspections will occur bi-weekly and after each significant rainfall event (1 inch or more within a 24 hour period) during construction until permanent erosion control measures have been properly installed and the site is stabilized.

FIELD BOOK #		DESIGN: JRK	CLIENT: LELAND DAHLGREN 20 U.S. ROUTE 1 YARMOUTH, MAINE
FIELD BOOK PAGE		DRAWN: MSB	
FLAT FILE INDEX NUMBER	5	CHECKED: RDA	PROJECT: CUMBERLAND BUSINESS PARK U.S. ROUTE ONE CUMBERLAND, MAINE
REV. DATE	2/24/95	BY SCALE: AS NOTED	
PROJECT OR: 34-242	2/27/95		
DRAWING NAME: C-300	STATUS		
SQUAW BAY CORP. Consulting Engineers P.O. BOX 566, CUMBERLAND CENTER, ME. 04021		EROSION CONTROL DETAILS AND SPECIFICATIONS	
PROJECT NUMBER: 94-242		PROJECT NUMBER: 94-242	
DRAWING NUMBER: C-300		DRAWING NUMBER: C-300	
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